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EXAMINER

LOVEL, KIMBERLY M

ART UNIT	PAPER NUMBER
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2167

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/667,690

Applicant(s)

DODDINGTON, ANDREW

Examiner

KIMBERLY LOVEL

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This communication is in response to the Amendment filed 5 March 2009.
2. Claims 1-17 are currently pending. In the Amendment filed 5 March 2009, claims 1, 11 and 13 are amended. This action is made Final.
3. The rejections of claims 1-3 and 9-16 as being unpatentable over US PGPub 2006/0059107 to Elmore et al in view of US PGPub 2004/0039964 to Russell et al; claims 4-8 as being unpatentable over US PGPub 2006/0059107 to Elmore et al in view of US PGPub 2004/0039964 to Russell et al and further in view of US PGPub 2004/0230559 to Newman et al; and claim 17 as being unpatentable over US PGPub 2006/0059107 to Elmore et al in view of US PGPub 2004/0039964 to Russell et al in view of US PGPub 2004/0230559 to Newman et al have been maintained.

Claim Objections

4. The objection to Claim 1 has been withdrawn as necessitated by applicant's amendment.

Claim Rejections - 35 USC § 112

5. The rejections of claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement have been withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 and 9-16 rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2006/0059107 to Elmore et al (hereafter Elmore) in view of US PGPub 2004/0039964 to Russell et al (hereafter Russell).

Referring to claim 1, Elmore discloses a method for presenting data and functions to a user via a presentation layer [presentation layer 103], for use in a distributed processing system to effect an interface between a business layer [Business layer 101] and the presentation layer, the method comprising the steps of:

providing a data set structure which implements an abstract interface for use in both the business layer and the presentation layer, said data set structure comprising hierarchical organizational information for arranging data and functions [objects] into at least one tree structure [hierarchy], the tree structure being configured to store data and functions of arbitrary type (see [0051]; [0052]; [0094]; [0514]-[0516]; and Fig 18);

populating a business layer data set in said business layer [business layer 101] according to said data set structure, said business layer data set comprising data and functions available for use in said business layer (see [0036]); and

populating a presentation layer data set in said presentation layer [presentation layer 103] according to said data set structure from said business layer data set, said

presentation layer data set comprising data and functions available for use by the user in said presentation layer (see [0038]).

Elmore fails to explicitly disclose the further limitations of instantiating the business layer data set in said business layer as beans; serializing the beans into XML; transporting the serialized beans to the presentation layer using Simple Object Access Protocol (SOAP); and deserializing the serialized beans in the presentation layer. Russell discloses presenting data and functions to a user via a presentation layer to effect an interface between a business layer [web service] and the presentation layer [a browser or client side code], including the further limitations of instantiating the business layer data set in said business layer as beans (see [0057] and [0061]); serializing the beans into XML (see [0057] and [0061]); transporting the serialized beans to the presentation layer using Simple Object Access Protocol (SOAP) (see [0048]); and deserializing the serialized beans in the presentation layer (see [0048]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the concept of processing the JavaBeans of Russell with the layers of Elmore. One would have been motivated to do so in order to increase system efficiency since it is well-known that JavaBeans are reusable software programs that are portable and platform-independent.

Referring to claim 2, the combination of Elmore and Russell (hereafter Elmore/Russell) discloses a method in accordance with claim 1 wherein providing a data set structure comprises providing a plurality of items, an item being an abstract

element of arbitrary type, comprising a plurality of data items and a plurality of function items (Elmore: see Fig 18).

Referring to claim 3, Elmore/Russell discloses a method in accordance with claim 2 wherein providing a plurality of data items comprises providing a data value for each of said plurality of data items (Elmore: see [0052]).

Referring to claim 9, Elmore/Russell discloses a method in accordance with claim 2 wherein providing a plurality of function items comprises providing a function for each of said plurality of function items (Elmore: see [0059]).

Referring to claim 10, Elmore/Russell discloses a method in accordance with claim 2 wherein defining a plurality of function items comprises defining a function set for each of said plurality of function items (Elmore: see [0039]).

Referring to claim 11, Elmore discloses an apparatus for use in a distributed data processing system comprising: at least one hardware server for:

providing a data set structure which implements an abstract interface for storing available data and identification of function calls [objects], said data and function calls being arranged in at least one tree structure [hierarchy], the tree structure being navigable without regard to the type of data or function being configured to store data and functions or arbitrary type (see [0051]; [0052]; [0094]; [0514]-[0516] and Fig 18);

populating a business layer [business layer 101] configured to store data and identification of function calls that are available for use by said presentation layer [presentation layer 103] in accordance with said data set (see [0038]);

populating a presentation layer configured to store data and identification of function calls that are available for use by a user in accordance with said data set (see [0036]).

Elmore fails to explicitly disclose the further limitations of instantiating the business layer data set in said business layer as beans; serializing the beans into XML; transporting the serialized beans to the presentation layer using Simple Object Access Protocol (SOAP); and deserializing the serialized beans in the presentation layer. Russell discloses presenting data and functions to a user via a presentation layer to effect an interface between a business layer [web service] and the presentation layer [a browser or client side code], including the further limitations of instantiating the business layer data set in said business layer as beans (see [0057] and [0061]); serializing the beans into XML (see [0057] and [0061]); transporting the serialized beans to the presentation layer using Simple Object Access Protocol (SOAP) (see [0048]); and deserializing the serialized beans in the presentation layer (see [0048]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the concept of processing the JavaBeans of Russell with the layers of Elmore. One would have been motivated to do so in order to increase system efficiency since it is well-known that JavaBeans are reusable software programs that are portable and platform-independent.

Referring to claim 12, Elmore/Russell discloses an apparatus in accordance with claim 11 wherein said presentation layer is further configured to request data and identification of function calls from said business layer and to store said data and

identification of function calls in accordance with said data set so that data and identification of function calls of said business layer can be available to said presentation layer (Elmore: see [0036]-[0039]).

Referring to claim 13, Elmore/Russell discloses an apparatus in accordance with claim 12 wherein said at least one hardware server is configured to store data and identification of function calls that are available for use by said presentation layer in accordance with said data set wherein said at least one server provides unique data and identification of function calls to said presentation layer (Elmore: see [0036]-[0039]).

Referring to claim 14, Elmore/Russell discloses an apparatus in accordance with claim 13 wherein business layer function calls are available to said presentation layer for execution at said presentation layer via said data set (Elmore: see [0036]-[0039]).

Referring to claim 15, Elmore/Russell discloses an apparatus in accordance with claim 13 wherein business layer function calls are available to said presentation layer for execution at said business layer via said data set (Elmore: see [0036]-[0039]).

Referring to claim 16, Elmore/Russell discloses an apparatus in accordance with claim 13 wherein business layer function calls are available at said presentation layer for execution at both said presentation layer and at said business layer via said data set (Elmore: see [0036]-[0039]).

8. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2006/0059107 to Elmore et al in view of US PGPub 2004/0039964 to

Russell et al as applied to claim 2 above, and further in view of US PGPub 2004/0230559 to Newman et al (hereafter Newman).

Referring to claim 4, while Elmore discloses domain objects (see [0052]), Elmore fails to explicitly disclose the further limitation of wherein defining a plurality of data items comprises defining a domain for each of said plurality of data items, the domain corresponding to the data type of a data item. Newman discloses multi-layer architecture (see abstract), including the further limitation wherein defining a plurality of data items comprises defining a domain for each of said plurality of data items, the domain corresponding to the data type of a data item (see [0122]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the concept of a domain disclosed by Newman to define the domain of Elmore. One would have been motivated to do so in order to clearly define the type of data a field can process.

Referring to claim 5, the combination of Elmore and Newman (hereafter Elmore/Newman) discloses a method in accordance with claim 4 wherein providing a domain for each of said data items comprises providing a domain home for each of said plurality of data items, the domain home being a means of locating a domain (Newman: see [0026]).

Referring to claim 6, Elmore/Newman discloses a method in accordance with claim 4 wherein providing a domain for each of said data items comprises providing a context for each of said plurality of data items, the context providing means for distinguishing between otherwise identical domains (Newman: see [0141]).

Referring to claim 7, Elmore/Newman discloses a method in accordance with claim 4 wherein providing a domain for each of said data items comprises providing a range domain for each of said plurality of data items, the range domain corresponding to those domains that have a continuous range of values, bound by an upper and lower limit [lists of acceptable values] (Newman: see [0024]).

Referring to claim 8, Elmore/Newman discloses a method in accordance with claim 4 wherein providing a domain for each of said plurality of data items comprises providing a discrete domain for each of said plurality of data items, the discrete domain corresponding to those domains that have an explicit list of permitted values [set of rules at the attribute level] (Newman: see [0025]).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2006/0059107 to Elmore et al in view of US PGPub 2004/0039964 to Russell et al in view of US PGPub 2004/0230559 to Newman et al.

Referring to claim 17, Elmore discloses a method for presenting data and functions to a user via a presentation layer [presentation layer 103], for use in a distributed processing system to effect an interface between a business layer [Business layer 101] and the presentation layer, the method comprising the steps of:

providing a data set structure which implements an abstract interface for use in both the business layer and the presentation layer, said data set structure comprising hierarchical organizational information for arranging data and functions [objects] into at

least one tree structure [hierarchy], the tree structure being configured to store data and functions of arbitrary type (see [0051]; [0052]; [0094]; [0514]-[0516]; and Fig 18);

populating a business layer data set in said business layer [business layer 101] according to said data set structure, said business layer data set comprising data and functions available for use in said business layer (see [0036]); and

populating a presentation layer data set in said presentation layer [presentation layer 103] according to said data set structure from said business layer data set, said presentation layer data set comprising data and functions available for use by the user in said presentation layer (see [0038]).

Elmore fails to explicitly disclose the further limitation of the tree structure which provides a plurality of data items and a plurality of function items, wherein each of said plurality of data items provides a data value, a range domain, and a context, the range domain having a domain home and wherein each of said plurality of function items provides at least one function.

Newman discloses multi-layer architecture (see abstract), including the further limitation of the tree structure which provides a plurality of data items and a plurality of function items, wherein each of said plurality of data items provides a data value, a range domain, and a context, the range domain having a domain home and wherein each of said plurality of function items provides at least one function (see [0024]; [0025]; [0026]; [0122] and [0141]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the concept of a domain disclosed by Newman to define the domain

of Elmore. One would have been motivated to do so in order to clearly define the type of data a field can process.

Response to Arguments

10. Applicant's arguments filed in regards to the prior art rejections have been fully considered but they are not persuasive.

11. Referring to Applicant's arguments on page 9 of the Remarks, the Applicant states "The hierarchy described in Elmore et al. must be a three-layer structure containing only and specifically "three types of objects on the hierarchy: root, billing point, and assigned product," where the root of the hierarchy must be at the top level. Elmore et al. at paragraph [0514]; and [0519]. Thus, the hierarchy of Elmore et al. cannot be configured to store data and functions of an arbitrary type, as alleged by the Examiner, because the data and functions must necessarily correspond tone of the enumerated objects, i.e., either the root, billing point or assigned product."

The examiner respectfully disagrees. It appears that the Applicant is putting heavy emphasis on the term "arbitrary type." Although the term is interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, the examiner fails to find an explicit definition in the specification for the meaning of the term "arbitrary type." The data and functions of Elmore can be represented by int, char, etc. Therefore, they can be of an arbitrary type. Furthermore, as stated in paragraph [0517], different objects can be associated with the hierarchy. Therefore, when given the

broadest reasonable interpretation, Elmore is considered to disclose the claimed limitation.

12. The rejections of claims 1-17 are maintained for the reasons stated above.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMBERLY LOVEL whose telephone number is (571)272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John R. Cottingham/
Supervisory Patent Examiner, Art Unit 2167

/Kimberly Lovel/
Examiner
Art Unit 2167

5 June 2009
/KL/

